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EXAMINER

MOORE, IAN N

ART UNIT

PAPER NUMBER

2616

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                               |                               |  |
|------------------------------|-------------------------------|-------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/682,591 | Applicant(s)<br>KUBLER ET AL. |  |
|                              | Examiner<br>Ian N. Moore      | Art Unit<br>2616              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 52-54, 60, 61 and 73-143 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 52-54, 60, 61 and 73-99 is/are allowed.
- 6) ☒ Claim(s) 100, 101, 103-123 and 125-143 is/are rejected.
- 7) ☒ Claim(s) 102 and 124 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 100,103,104,111-114, 121,122,125,126,133-136 and 143 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 4,453,247) in view of Baran (US 4,903,261) and Hung (US 5,434,856), and further in view of Fischer (U.S. 4,941,089).

**Regarding claim 100 and 122**, Suzuki discloses a method (see FIG. Methods 3-5,7, Method) for processing voice for a device capable of using a protocol communications over a network (see FIG. 1, speech packet processing network 2) comprising:

- receiving a voice stream (see FIG.1, receive from telephone 1; see col. 2, line 36-65);
- digitizing the voice stream to provide digital voice data (see FIG. 1, A-D converter 4; see col. 2, line 36-65);
- compressing (Suzuki: col. 2, lines 43-63) the digital voice data;
- packetizing the digital voice data according to an network protocol for communication over the network (see FIG. 1, Packetizing circuit 7; see col. 2, line 36-65),
- transmitting via communication the digital voice data packets (see FIG. 1, Packet Transmitting circuit 18; see col. 2, line 36-65);
- receiving digital voice data packets communicated over the network (see FIG. 1, Packet receiving circuit 16; see col. 3, line 6-25);

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converting the received digital voice data packets to a voice stream (see FIG. 1, speech synthesizer 9 and D-A converter; see col. 5, line 15-25); and

buffering (see FIG. 1, variance absorbing buffer 11), for a buffer time, the received digital voice data before converting the digital voice data to a voice stream, the buffer time being adjustable to accommodate variations in transmission times over the network (Figs. 1-6; abstract; col. 1, lines 36-43; col. 2, lines 9-17; col. 2, lines 43-64; col. 3, line 8-col. 4, line 2; col. 4, lines 31-50; col. 5, lines 1-41; col. 6, lines 23-35; col. 7, lines 1-20).

wherein the buffer time is based upon detecting an error (see col. 1, lines 36-43; col. 2, lines 9-17; col. 2, lines 43-64; col. 3, line 8-col. 4, line 2; col. 4, lines 31-50; col. 5, lines 1-41; col. 6, lines 23-35; col. 7, lines 1-20; detecting that a change/delay/error in transmission time and/or transmission variance has happened and needs to be corrected for), or transmission delay (col. 3, lines 26-29; col. 5, lines 37-41; Figs. 1-6; abstract; col. 1, lines 36-43; col. 2, lines 9-17; col. 2, lines 43-64; col. 3, line 8-col. 4, line 2; col. 4, lines 31-50; col. 5, lines 1-41; col. 6, lines 23-35; col. 7, lines 1-20).

Suzuki does explicitly disclose after depacketizing. However, buffering after depacketizing or decoding is well known in the art. In particular, Baran discloses depacketizing the received digitized voice data packets (see FIG. 7, Voice/Data Depacketizer 164); and

after depacketizing, buffering the received digitized voice data (see FIG. 7, FIFO RAM 166; see col. 12, line 12-15, 45-54) for an adjustable buffer time (see col. 12, line 54 to col. 13, line 23; 42-49; FIFO stores the depacketized voice data for a time (i.e. FIFO time) according to the speech detector 157 and Microprocessor 154).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide buffering/FIFO-ing after depacketizing the voice packet, as taught by Baran, in the system of Suzuki, so that it would provide sequential channelized PCM data to store in per channel circular FIFO so that PCM data can be read from the queue/FIFO synchronously; see Baran col. 12, line 46-49, see col. 19, line 16-21.

Neither Suzuki nor Baran explicitly discloses a wireless internet protocol.

However, Huang teaches a method for processing voice (Figs. 1-3; routers 208, Fig. 2;), compressing voice (col. 1, lines 29-45), buffering voice packets (col. 1, lines 58-67; col. 3, lines 17-42) for a device capable of using a wireless internet protocol (Fig. 1; col. 2, lines 14-67), as specified in claim 52; and wireless communication of digital voice packets (Figs. 1-3; e.g., col. 2, lines 1-67), as specified in claim 59-60.

It would have been obvious to use a wireless internet protocol because the combination of Suzuki and Baran discloses packet switching voice data as well as using telephones. Making the voice packet network wireless allows for more mobility and can allow for people without phone lines to send voice data from wireless phone. By using voice packets, the data can be more easily sent over the Internet, or Frame Relay (Huang: Fig. 1), GSM, GPRS, TDMA, or CDMA networks.

Although Suzuki discloses transmission delay, the combined system of Suzuki, Baran and Huang does not explicitly discloses variations/delay in propagation time, and a period of time between sending at least one packet or communication to the origin of received packets, and receiving at least one corresponding response communication from the origin.

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However, Fischer teaches variations/delay in propagation time (see col. 2, line 43-50; propagation delay), and wherein the buffer time is based upon a period of time (see col. 25, line 1-45; buffer length, minimum transmit length, or the time before sending packet are based on a time) between sending at least one packet or communication (see FIG. 2, sending server/client station control command packet) to the origin of received data packets (see FIG. 2, to client/server station) and receiving at least one corresponding response packet or communication (see FIG. 2, receiving control reply packet) from the origin of the received data packets (see FIG. 2, from client/server station); see col. 25, line 1-45. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide variations/delay in propagation time, and a period of time between sending at least one packet or communication to the origin of received packets, and receiving at least one corresponding response communication from the origin, as taught by Fischer in the combined system of Suzuki, Baran and Huang, so that it would provide reliable data communication at longer distance without reduction in throughput; see Fischer col. 3, line 9-16.

**Regarding claims 112 and 134,** Suzuki discloses a system for processing voice for transmission over a network having variable delays (see FIG. 1, speech packet switching system 2) comprising:

a transmitter (see FIG. 1, packet transmitting circuit 18) and receiver for communication (see FIG. 1, packet receiving circuit 16);

conversion circuitry for converting an analog voice stream to digital voice data (see FIG. 1, A-D converter 4) and for converting digital voice data to an analog voice stream for the reproduction of voice (see FIG. 1, D-A converter 8); see col. 2, line 46-55;

processing circuit (see FIG. 1, controller 19) for managing the packetization of the digital voice data to provide digital voice data packets and for managing the depacketization of digital voice data packets, the processing circuit packetizing the digital voice data according to an protocol (see col. 2, line 56-64);

a buffer (see FIG. 1, Variance Absorbing Buffer 11) for buffering digital voice data, the processing circuit directing delivery of the buffered digital voice data to the conversion circuitry after a delay that is adjustable by the processing circuit to accommodate variations in packet transmission delays over the network (abstract; col. 1, lines 36-65; col. 2, lines 9-17; col. 2, lines 43-64; col. 3, line 8-col. 4, line 2; col. 4, lines 31-50; col. 5, lines 1-41; col. 6, lines 23-35; col. 7, lines 1-20);

wherein the delay is based upon detecting an error (see col. 1, lines 36-43; col. 2, lines 9-17; col. 2, lines 43-64; col. 3, line 8-col. 4, line 2; col. 4, lines 31-50; col. 5, lines 1-41; col. 6, lines 23-35; col. 7, lines 1-20; detecting that a change/delay/error in transmission time and/or transmission variance has happened and needs to be corrected for), or transmission delay (col. 3, lines 26-29; col. 5, lines 37-41; Figs. 1-6; abstract; col. 1, lines 36-43; col. 2, lines 9-17; col. 2, lines 43-64; col. 3, line 8-col. 4, line 2; col. 4, lines 31-50; col. 5, lines 1-41; col. 6, lines 23-35; col. 7, lines 1-20).

Suzuki does explicitly disclose after depacketizing. However, buffering after depacketizing or decoding is well known in the art. In particular, Baran discloses depacketizing the received digitized voice data packets (see FIG. 7, Voice/Data Depacketizer 164); and

after depacketizing, buffering the received digitized voice data (see FIG. 7, FIFO RAM 166; see col. 12, line 12-15, 45-54) for an adjustable buffer time (see col. 12, line 54 to col. 13,

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line 23; 42-49; FIFO stores the depacketized voice data for a time (i.e. FIFO time) according to the speech detector 157 and Microprocessor 154).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide buffering/FIFO-ing after depacketizing the voice packet, as taught by Baran, in the system of Suzuki, so that it would provide sequential channelized PCM data to store in per channel circular FIFO so that PCM data can be read from the queue/FIFO synchronously; see Baran col. 12, line 46-49, see col. 19, line 16-21.

Neither Suzuki nor Baran explicitly discloses a wireless internet protocol.

However, Huang teaches a method for processing voice (Figs. 1-3; routers 208, Fig. 2;), compressing voice (col. 1, lines 29-45), buffering voice packets (col. 1, lines 58-67; col. 3, lines 17-42) for a device capable of using a wireless internet protocol (Fig. 1; col. 2, lines 14-67), as specified in claim 52; and wireless communication of digital voice packets (Figs. 1-3; e.g., col. 2, lines 1-67), as specified in claim 59-60.

It would have been obvious to use a wireless internet protocol because the combination of Suzuki and Baran discloses packet switching voice data as well as using telephones. Making the voice packet network wireless allows for more mobility and can allow for people without phone lines to send voice data from wireless phone. By using voice packets, the data can be more easily sent over the Internet, or Frame Relay (Huang: Fig. 1), GSM, GPRS, TDMA, or CDMA networks.

Although Suzuki discloses transmission delay, the combined system of Suzuki, Baran and Huang does not explicitly discloses propagation delay, and a period of time between sending

at least one packet or communication to the origin of received packets, and receiving at least one corresponding response communication from the origin.

However, Fischer teaches a variations/delay in propagation time (see col. 2, line 43-50; propagation delay), and wherein the buffer delay/time is based upon a period of time (see col. 25, line 1-45; buffer length, minimum transmit length, or the time before sending packet are based on a time) between sending at least one packet or communication (see FIG. 2, sending server/client station control command packet) to the origin of received data packets (see FIG. 2, to client/server station) and receiving at least one corresponding response packet or communication (see FIG. 2, receiving control reply packet) from the origin of the received data packets (see FIG. 2, from client/server station); see col. 25, line 1-45. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide propagation delay, and a period of time between sending at least one packet or communication to the origin of received packets, and receiving at least one corresponding response communication from the origin, as taught by Fischer in the combined system of Suzuki, Baran and Huang, so that it would provide reliable data communication at longer distance without reduction in throughput; see Fischer col. 3, line 9-16.

**Regarding claims 103, 113,125 and 135,** Huang discloses the device is a mobile device (see FIG. 1, hand held portable device 101-103; see col. 2, line 15-24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide portable device, as taught by Huang in the combined system of Suzuki, Baran and Huang, for the same motivation as set forth above in claim 100 and 122.

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**Regarding claims 104,114,126 and 136**, Huang discloses the device is a handheld device configured to be operated while being held in a hand of a user (see FIG. 1, handheld portable device 101-103; see col. 2, line 15-24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a handheld device configured to be operated while being held in a hand of a user, as taught by Huang in the combined system of Suzuki, Baran and Huang, for the same motivation as set forth above in claim 100 and 122.

**Regarding claims 111,121,133 and 143**, Suzuki discloses the device is an integrated circuit (see col. 7, line 20-36; the packet switching system/circuit is Motorola IC (integrated Circuit)).

3. Claims 101 and 123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki, Baran, Huang, Fischer as applied to claims 100 and 122 above, and further in view of Barberis (US 4,317,195).

**Regarding Claims 101 and 123**, the combined system of Suzuki, Baran, Huang, and Fischer discloses the packetizing each digital voice data packet as set forth above in claim 100 and 122 above.

Neither Suzuki, Baran, Huang nor Fischer explicitly discloses a group identifier. However, Barberis teaches for each voice data packet having a group identifier (coded headings, col. 1, lines 25; detecting talk spurts and using sequence labels or IDs, col. 1, lines 26-37; col. 3, lines 30-55). It would have been obvious to use group identifiers for each voice data packet because Suzuki discloses a speech packet switching network (e.g., abstract) and it is notoriously

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well known for packets to use sequence numbers so that packets of the same sequence or in this case, talkspurt, do not have to take the same path and can arrive at the destination out of order. The group IDs can assist the receiver to reassemble the packets at destination and determine if the last packet of the sequence has been sent. This method can also allow for least cost routing to be used on each packet instead of having all the packet traverse the same path.

4. Claims 105,106,115,116,127,128,137 and 138 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki, Baran, Huang, Fischer and further in view of Sainton (US00RE38787E).

**Regarding Claims 105,115,127 and 137**, neither Suzuki, Baran, Huang, nor Fischer explicitly discloses a keypad. However, having a keypad in the user radio unit is well known in the art. In particular, Sainton teaches at least one input device comprises a keypad (see FIG. 2, Keypad 202; see col. 10, line 60-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a keypad, as taught by Sainton in the combined system of Berken, Baran, Huang and Fischer, so that it would allow a cellular phone to be constructed with the addition of minimal components, and it would also enable a user a capability to enter commands (e.g. dialing); see Sainton col. 10, line 56-67.

**Regarding Claims 106,116,128 and 138**, neither Suzuki, Baran, Huang, nor Fischer explicitly discloses a display. However, having a display in the user radio unit is well known in the art. In particular, Sainton teaches at least one output device for outputting received digital data, wherein the at least one output device comprises a display (see FIG. 2, display 204; see col. 10, line 60 to col. 11, line 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a display, as taught by Sainton in the

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combined system of Berken, Baran, Huang and Fischer, so that it would allow a cellular phone to be constructed with the addition of minimal components, and it would also enable a user a capability to view; see Sainton col. 10, line 56 to col. 11, line 5.

5. Claims 107,108,117,118,129, 130,139, and 140 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki, Baran, Huang, Fischer, as applied to claims 100 and 122 above, and further in view of Honing (US005481533A).

**Regarding Claims 107,108,117,118,129,130,139, and 140**, neither Suzuki, Baran, Huang, nor Fischer explicitly discloses a spread spectrum technique wherein the spread spectrum technique is a direct sequence spread spectrum technique. However, using direct sequence spread spectrum technique is well known in the art. In particular, Honing discloses wherein the wireless packet network communicates using a direct sequence spread spectrum technique (abstract; see col. 2, line 34-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide direct sequence spread spectrum technique, as taught by Honing, in the combined system of Suzuki, Baran, Huang, Fischer, so that it would suppress interference; see Honing col. 2, line 38, line 38-40.

6. Claims 109,110,119,120,131,132,141, and 142 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki, Baran, Huang, Fischer, as applied to claims 100,112,122 and 134 above, and further in view of Cripps (US005838730A).

**Regarding Claims 109,110,119,120,131,132, 141 and 142** neither Suzuki, Baran, Huang, nor Fischer explicitly disclose wireless communication take place in an unlicensed frequency band, wherein the unlicensed frequency band is approximately 2.4 gigahertz. However, using 2.4 GHz frequency hopping is well known in the art as defined by FCC. In particular, Cripps discloses wireless communication take place in an unlicensed frequency band, wherein the unlicensed frequency band is approximately 2.4 gigahertz (abstract; see col. 2, line 13-20; see col. 36, line 32-45; 2.4 GHz).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide 2.4 GHz, as taught by Cripps, in the combined system of Suzuki, Baran, Huang and Fischer, so that it would provide a transmitter/receiver in accordance with FCC rules for 2.4 GHz ISM which is low cost and low power; see Cripps col. 2, line 15-32.

#### ***Response to Arguments***

7. Applicant's arguments, see page 25-28, filed 9-6-2006, with respect to amended claims 52 and 60 have been fully considered and are persuasive. The rejection of claims 52 and 60 has been withdrawn.

8. Applicant's arguments, see page 15, filed 4/24/2007, with respect to **new claims 100-143** have been fully considered but they are not persuasive.

**Regarding claims 100-143, the applicant argued that, "...independent claims 100, 112, 122 and 134 are allowable, in that they are similar in many respects to existing claims 52 and 60 recites similar limitations..."** in page 15.

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In response to applicant's argument, the examiner respectfully disagrees with the argument. New claims 100, 112, 122 and 134 are not the same as allow claims 52 and 60. For instance, claims 100, 112, 122 and 134 broaden the scope of invention by reciting "one continuation" or "one packet", instead of "one test packet" recited in allowed claims 52 and 60. Thus, new claims 100-143 are subjected to new grounds of rejection.

*Allowable Subject Matter*

9. Claims 52-54,60,61,73-99 are allowed.
10. Claims 102 and 124 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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5/9/07



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